

- (b) the coatings may have a thickness of 10-500  $\mu\text{m}$ ;
- (c) the ratio of the short diameter to the long diameter of Si particles is 1/3 or more;
- (d) the comparative examples particles of a size greater than 10  $\mu\text{m}$ ;
- (e) thermally spraying includes those spraying processes where "material is converted to molten or half-molten state" as admitted in the subject specification;
- (f) primary Si particles would have been formed by the thermal spraying under a half-molten state; and
- (g) the improved adhesive strength would have been inherent in the coatings.

With regard to the claim limitation of the particle size greater than 10  $\mu\text{m}$ , it was asserted that (1) the comparative example teaches such particles and further that (2) the Mori et al patent teaches that these particles are undesirable in the specifically disclosed materials. From the latter statement (2), it further was presumed that such materials actually had been made by the inventors of the cited patent.

Further, it was acknowledged that the Mori et al patent does not teach the use of (a) HVOF flame spraying of applying the alloy and (b) surface roughening of the substrate by shot blasting. As to the former (a), it was alleged that the HVOF is a well known form of thermal spraying as taught by the Mori et al patent. As to the latter (b), the cited patent to Kawagoe et al was asserted to provide this deficiency. Reconsideration of this rejection in view of the attached Declaration and the following comments is respectfully requested.

As before, applicants initially object to the assertion relative to the claimed subject matter regarding the inclusion of particles having a size greater than 10  $\mu\text{m}$ . That is, it was asserted that (1) the comparative example of the Mori et al patent teaches such particles and further that (2) the patent teaches that these particles are undesirable in the specifically disclosed materials. More particularly as to assertion (1) above, the fact that the comparative example of the Mori et al patent teaches such particles is irrelevant as the composition of the comparative example has not been applied in alleging that the claimed subject matter is unpatentable thereover. Rather, it was alleged that the subject claims are obvious over the supposed inventive concept according to the Mori et al patent. Thus, it is submitted that the focus should be whether one of ordinary skill in the art, who was aware of the Mori et al patent, would utilize the disclosure from the comparative examples as to a particle size in the compositions according to the supposed inventive compositions disclosed in the patent. It is submitted that one of ordinary skill in the art would not be taught or suggested to do so by the teachings of the cited patent, particularly in view of the statement that particles of sizes greater than 10  $\mu\text{m}$  are undesirable.

In addition, it was asserted in the Action that the applicants herein have not met the burden of showing that the properties of the products according to the invention such as (1) the adhesive strength, (2) the amount of primary or eutectic particles, and/or the number of Si particles over 10  $\mu\text{m}$  provide patentable distinctions over the products

according to the Mori et al patent. It is submitted that the products according to the claimed invention differ from those of the patent in terms of one or more properties and this difference produces unexpected or surprising results. In support thereof, attention is directed to the attached Declaration of Mr. Soo-Myung Hong, a co-inventor of the subject application, which sets forth comparative experiments regarding, among others, flame-sprayed layers formed on a rolled aluminum sheet.

More specifically, the Declaration demonstrates from experimental results, in order to overcome the above position, that the products according to the claimed invention differ from those of the Mori et al patent in terms of one or more properties and this difference produces unexpected results. In this regard, attention is directed to Table 3 of the Declaration which shows that the products according to the present invention have significantly improved wear amount and seizure load as compared with comparative products produced by different procedures and/or having different structures.

It is submitted that the evidence presented in this Declaration positively distinguishes the subject claims over the teachings of the cited patent to Mori et al whether taken singly or in combination. In view of the foregoing, it is submitted that the subject application is now in condition for allowance and early notice to that effect is earnestly solicited.

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In the event this paper is not timely filed, the undersigned hereby petitions for an appropriate extension of time. The fee for this extension may be charged to Deposit Account No. 01-2340, along with any other additional fees which may be required with respect to this paper.

Respectfully submitted,

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Enclosure: Declaration of Mr. S. Hong